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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,848	03/31/2000	James Aloysius Donnelly	AUS000116US1	9561

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EXAMINER

FLYNN, KIMBERLY D

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/539,848

Applicant(s)

DONNELLY ET AL.

Examiner

Kimberly D Flynn

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12-16 and 19-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9, 12-16 and 19-23 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to an Amendment filed February 20, 2004. Claims 1-9, 12-16, and 19-22 are presented for further consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein (U.S. Patent No. 6,374,287, hereinafter Goldstein)

In considering claim 1, Goldstein discloses a system for allowing client processes to run on distributed window server extensions comprising:

a terminal including a display, a keyboard, and a pointing device (col. 3, lines 20-24);

a display server on the local host associated with a user of the terminal, wherein the display server enables the user to execute GUI application on the local and remote hosts from the terminal via a display server authorization mechanism (col. 3, lines 50-67 through col. 1, lines 1-9); and

wherein the network is configured to enable the user to execute a text string entered at the terminal as a shell command on the remote host via the display server (col. 4, lines 58-67 through col. 5, lines 1-5).

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While Goldstein discloses the system substantially as claimed, Goldstein does not disclose the wherein the text string executed as a command is a shell command. Executing shell commands on a remote host and displaying the output of the commands are well known features of the TELNET protocol. Telnet is a terminal-remote host application that communicates with a remote host using a TELNET protocol, enabling a user to execute shell commands on the remote host and displaying the output of the commands. The X Window System, as claimed by the applicant, allows users to simultaneously access applications (TELNET) on one or more UNIX servers and display results in multiple windows on a local display. The uses and advantages for using the TELNET protocol were well known in the art at the time the invention was made, therefore; one of ordinary skill in the art would have found it obvious to incorporate the TELNET protocol because it would expand the compatibility and usability of the system for executing remote commands.

4. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein in view of Lefebvre (U.S. Patent No. 6,249,294, hereinafter Lefebvre).

In considering claim 2, while Goldstein discloses the system substantially as claimed Goldstein does not disclose wherein the local host includes a client application and the remote host includes a daemon process, and wherein the client application is enabled to receive the command from the user and the daemon process is configured to retrieve and execute the command. Nonetheless, the uses and advantages of the aforementioned limitations are well known features of The X Window System, which is a standard for implementing window-based user interfaces in a networked computer system as evidenced by Lefebvre in (col. 3, line 9-26).

In similar art Lefebvre discloses a system comprising a single logical screen computer display that uses multiple remote computer systems to perform hardware accelerated 3D graphic operations wherein the system includes a client process operable to receive and broadcast OGL command buffers and daemon processes operable to access the shared memory structures for the purpose accessing and executing the commands stored there.

Therefore, it would have been obvious to modify the system as disclosed by Goldstein to include the client application of the local host for receiving commands and the daemon process of the remote host configured to retrieve and execute commands taught by Lefebvre in order to distribute the processing among multiple computers, thus; allowing each of them to perform additional functions. Therefore the teachings of Lefebvre would have been obvious modifications to the system as disclosed by Goldstein.

In considering claim 3, the combined system of Goldstein and Lefebvre further discloses wherein the daemon process is configured to monitor changes to a property of the display server (see Lefebvre, col. 15, lines 47-49); and further wherein the client application is configured to alter the display server property upon receiving the command (see Lefebvre, col. 15, lines 42-43).

In considering claim 4, the combined system of Goldstein and Lefebvre further discloses wherein the daemon process is configured to open a display server window and to store a window id of the display window as the display server property (see Lefebvre, col. 15, lines 37-42); and wherein the client application is configured to change the display server property to zero upon receiving the command (see Lefebvre, col. 15, lines 60-65).

In considering claim 5, the combined system of Goldstein and Lefebvre further discloses wherein the client application is enabled to transfer the received command to a clipboard associated with the display server window (see Lefebvre col. 19, lines 26-31); and wherein the daemon process is enabled to retrieve the command from the clipboard upon detecting a change to the display server property (see Lefebvre col. 19, lines 35-39).

5. Claims 6-9, 12, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefebvre.

In considering claim 6, Lefebvre discloses a distributed windowing system program product enabling remote execution in a data processing network including a local host and a remote host, the computer product comprising:

a display server on the local host, wherein the display server enables a user of a display terminal connected to the network to invoke local and remote GUI applications (col. 19, lines 18-23);

a client application on the local host connected to the display server and configured to receive a command string and, upon receiving the command string, to paste the command string to a clipboard (col. 19, lines 26-31); and

a daemon process on the remote host configured to retrieve the command string from the clipboard and further configured to execute the command string as a shell command on the remote host (col. 19, lines 35-39).

While Lefebvre discloses the system substantially as claimed, Lefebvre does not disclose the wherein the text string executed as a command is a shell command. Executing shell commands on a remote host and displaying the output of the commands are well known features

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of the TELNET protocol. Telnet is a terminal-remote host application that communicates with a remote host using a TELNET protocol, enabling a user to execute shell commands on the remote host and displaying the output of the commands. The X Window System, as claimed by the applicant, allows users to simultaneously access applications (TELNET) on one or more UNIX servers and display results in multiple windows on a local display. The uses and advantages for using the TELNET protocol were well known in the art at the time the invention was made, therefore; one of ordinary skill in the art would have found it obvious to incorporate the TELNET protocol because it would expand the compatibility and usability of the system for executing remote commands.

In considering claim 12, Lefebvre discloses a method of executing a shell command on a remote host comprising:

creating a first window with a first process, and storing an id associated with the first window as a property of a display server (see Lefebvre, col. 15, lines 37-42);

monitoring for alteration in the display server property with the first process (see Lefebvre, col. 15, lines 47-49);

entering a command string via a client application, wherein, upon receiving the command string, the client application is configured to store the command string in a clipboard associated with the first window and to alter the display server property (see Lefebvre, col. 15, lines 42-43); and

upon detecting the alteration in the display server property, retrieving the command string from the clipboard and executing the command string as a shell command on the remote host (see Lefebvre col. 15, lines 66-67 through col. 16, lines 1-6).

While Lefebvre discloses the system substantially as claimed, Lefebvre does not disclose the wherein the text string executed as a command is a shell command. Executing shell commands on a remote host and displaying the output of the commands are well known features of the TELNET protocol. Telnet is a terminal-remote host application that communicates with a remote host using a TELNET protocol, enabling a user to execute shell commands on the remote host and displaying the output of the commands. The X Window System, as claimed by the applicant, allows users to simultaneously access applications (TELNET) on one or more UNIX servers and display results in multiple windows on a local display. The uses and advantages for using the TELNET protocol were well known in the art at the time the invention was made, therefore; one of ordinary skill in the art would have found it obvious to incorporate the TELNET protocol because it would expand the compatibility and usability of the system for executing remote commands.

In considering claim 7-8 and 21 Lefebvre further discloses wherein the daemon process is configured to open a display server window and to store an id associated with the display window as the display server property (see Lefebvre, col. 15, lines 37-42); and wherein the client application is configured to change the display server property to zero upon receiving the command (see Lefebvre, col. 15, lines 60-65).

In considering claim 9, Lefebvre further discloses wherein the client application is enabled to transfer the received command to a clipboard associated with the display server window (see Lefebvre col. 19, lines 26-31); and wherein the daemon process is enabled to retrieve the command from the clipboard upon detecting a change to the display server property (see Lefebvre col.19, lines 35-39).

In considering claim 20, Lefebvre further discloses wherein the display server enables execution of local and remote GUI applications from a terminal served by the display server (see Lefebvre col. 19, lines 18-23).

6. Claims 13-16, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefebvre in view of Goldstein.

In considering claim 13, while Lefebvre discloses the system substantially as claimed Lefebvre does not disclose wherein the client resides on the local host of the system, the first process resides on a remote host of a multi-host data processing system, and the command string entered on a terminal connected to the local host. Nonetheless, the uses and advantages of the aforementioned limitations are well known features of The X Window System, which is a standard for implementing window-based user interfaces in a networked computer system as evidenced by Goldstein.

In similar art, Goldstein discloses wherein the client process resides on the local computer (see Goldstein Fig. 1, (121) and col. 3, lines 50-55) the first process resides on a remote host of a multi-host data processing system (see Goldstein Fig. 1, (145)), and the test string is executed as a command on the remote host (col. 4, lines 41-48). Therefore, it would have been obvious to modify the system as disclosed by Lefebvre to include the client process of the local host, the first process of the remote host, and the test string executed as a command on the remote host in order to allow the user to perform remote execution of commands. Therefore the teachings of Goldstein would have been obvious modifications to the system as disclosed by Lefebvre.

In considering claims 14 and 15, although the combined system of Lefebvre and Goldstein discloses the system substantially as claimed, it does not explicitly disclose wherein the command comprises a command shutting down the remote host and a command invoking an application residing on the remote host. However, the Examiner takes official notice that commands for shutting down the remote host and invoking an application residing on the remote host are notoriously well known in the art. A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying the combined system of Lefebvre and Goldstein to include the aforementioned commands in order to provide the user with remote control of the application. Therefore, the aforementioned limitations would have been obvious modifications.

In considering claim 16, the combined system of Lefebvre and Goldstein further discloses wherein the command string is entered by a user of a terminal controlled by the display server (see Goldstein, col. 4, lines 58-62).

In considering claim 19, although the combined system of Lefebvre and Goldstein discloses the system substantially as claimed, it does not explicitly disclose wherein prior to creating the first window, logging into a local host of a multi-host computer system, wherein upon logging in, a windowing system initiates the display server and creates an authorization file associated with the user and by which applications connect to the display server. However, the Examiner takes official notice that a system initiating an authorization file for logging into a system is notoriously well known in the art. A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying the combined system of Goldstein and Lefebvre to include the authorization file upon a user logging in to the system in

order to protect the system from unauthorized users and to provide greater security. Therefore, the aforementioned limitations would have been obvious modifications.

In considering claim 22, the combined system of Lefebvre and Goldstein further discloses wherein the display server comprises an X server of an X window system (see Goldstein, col. 3, lines 56-58).

7. Claims 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefebvre in view of Giokas et al. (U S. Patent No. 5,408,602, hereinafter Giokas).

In considering claim 23, While Lefebvre discloses the system substantially as claimed, Lefebvre does not disclose wherein the client application and the daemon host have access privilege to the display server via a common access code associated with the user and wherein the user is enabled to execute the shell command on the remote host based solely on the access privilege to the display server. Nonetheless, the system that includes wherein the client application and the daemon host have access privilege to the display server via a common access code is well known as evidenced by Giokas.

In similar art, Giokas discloses a system and method for emulating a window management environment having a uniform windowing interface wherein the system includes a unified window system serving both X display server clients and host server clients wherein the X server front end implementing the X display server shares common support functions (conventions, code, data structures, hardware access structures, etc.) with the host server front end, thereby allowing the hardware resources to be harmoniously allocated (col. 2, lines 13-24). A person having ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the common access code associated with the user to provide access

privileges to the display server in order to avoid the need for the user to remember multiple passwords and to reduce the amount of information that must be stored by the system. Therefore the claimed limitation would have been an obvious modification to the system as disclosed by Lefebvre.

Response to Arguments

8. Applicant's arguments filed February 20, 2004 have been fully considered but they are not persuasive.

Applicants argue that neither types of remote command execution as taught by Goldstein anticipate or suggest the ability to execute shell commands on the system. Applicant also argues that it would be necessary to invoke some other mechanism, such as Telnet, which is notoriously well known, to do command line or shell command execution on a remote host. While the Applicants admit that in order to perform shell commands the present invention must incorporate the well-known Telnet program, the Examiner points out that the claims do not exclude such incorporation.

The claims recite, *inter alia*, wherein the network is configured to enable the user to execute a text string entered at the terminal as a shell command on the remote host via the display server. The claim is silent to how the network is configured execute shell commands without the use of Telnet to perform the aforementioned functions. Telnet is a terminal-remote host program that communicates with a remote host using a TELNET protocol, enabling a user to execute shell commands on the remote host and displaying the output of the commands. The uses and advantages for using the TELNET protocol were well known in the art at the time the

invention was made, therefore; one of ordinary skill in the art would have found it obvious to incorporate the TELNET protocol because it would expand the compatibility and usability of the system for executing remote commands.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D Flynn whose telephone number is 703-308-7609. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703-746-72388, for After Final communications

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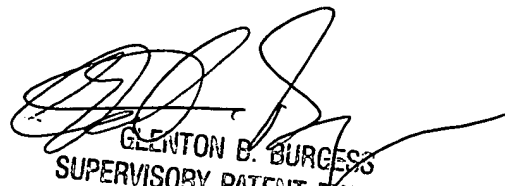
(703) 746-7239, for Official communications

(703) 746-7240, for Non-Official/Drafts.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-3900).

Kimberly D Flynn
Examiner
Art Unit 2153

KF
April 26, 2004


GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100